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AMENDED CLAIMS

[received in the International Office on July 29, 2005 (07/29/2005)
     original claims 1-23 replaced by new claims 1-19 (4 pages)]

Claims

1. A method for detecting an error in printed images (03)
generated by a printing press, wherein the error is determined by
means of a comparison of at least one of the printed images (03)
actually recorded by means of a line-scanning color camera (01) in
the course of an ongoing printing process with a reference image,
wherein amplitude values (Axy) of individual color channels of the
line-scanning color camera (01) are determined from a recording of
the printed image (03) and from the reference image in regard to a
pixel field consisting of several pixels (i), wherein the
reference image is respectively determined by a maximum value
(Aimax) and a minimum value (Aimin) of each pixel (i) in the pixel
field, wherein a deviation between an amplitude value (Aip)
determined for the respective pixel (i) from the recording of the
printed image (03) and the respective maximum value (Aimax) or the
respective minimum value (Aimin) is determined for every pixel (i)
in the pixel field, wherein the determined deviation is evaluated
for detecting the error, wherein the printed product is classified
as having a poor print quality if the detected deviation exceeds a
set decision threshold (W, F), characterized in that the deviation

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is evaluated by means of two decision thresholds (W, F) whose amounts follow each other in the direction of an increasing deviation, wherein the printed product is classified as having a poor print quality if the deviation exceeds a decision threshold (F) correlated with a deviation of increased value.

2. The method in accordance with claim 1, characterized in that the decision threshold correlated with a smaller amount of deviation constitutes a warning threshold (W) and the decision threshold correlated with a larger amount of deviation an error threshold (F).

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3.   The method in accordance with claim 1, characterized in that each of the decision thresholds (W, F) is set independently of the respectively other one.

4.   The method in accordance with claim 1, characterized in that it is determined by means of the adjustable decision thresholds (W, F) at what number of different pixels (i) of the pixel field a deviation must occur so that either a warning or an error report is generated.

5.   The method in accordance with claim 2, characterized in that a warning is generated when the warning threshold (W) has been reached.

6.   The method in accordance with claim 2, characterized in that an error report is generated when the error threshold (F) has been reached.

7.   The method in accordance with claim 1, characterized in that a contrast (AK) existing between the actually recorded printed image (03) and the reference image is evaluated as a deviation between the actually recorded printed image (03) and the reference image.

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8.   The method in accordance with claim 7, characterized in
that a warning is issued if the contrast (AK) in respect to the
reference image for one or several pixels (i) lies above the
warning threshold (W), but still below the error threshold (F).

9.   The method in accordance with claim 1, characterized in
that in the course of a learning phase amplitude values (Axy) in a
line-scanning color camera (01) are computed into a reference
image by an image processing system (04), wherein a deviation
determined in the learning phase does not exceed a decision

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threshold (F) which classifies a printed product as having a poor print quality.

10.   The method in accordance with claim 1, characterized in that the reference image with the respective maximum values (Aimax) and minimum values (Aimin) is generated for each pixel (i) from recorded amplitude values (Axy) of several recordings.

11.   The method in accordance with claim 1, characterized in that a check is performed whether several pixels (i) in the pixel field exceed one of the decision thresholds (W, F) by forming a deviation occurring over an area.

12.   The method in accordance with claim 11, characterized in that the area of the pixel field is determined in which a deviation from the reference image exists.

13.   The method in accordance with claim 11, characterized in that the decision thresholds (W, F) are set for the area of the pixel field.

14.   The method in accordance with claim 11, characterized in that the area of the pixel field is determined whose amplitude values (Axy) lie above the error threshold (F).

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15.   The method in accordance with claim 11, characterized
in that an error weight (FG) is set, wherein the error weight (FG)
constitutes a value for all deviations which are maximally
permissible in a fixed area of the pixel field, wherein when the
error weight (FG) is exceeded an error is reported independently
of the deviation occurring over the area.

16.   The method in accordance with claim 1, characterized
in that a display of the deviations is provided on a monitor (06)
separated in accordance with the type of deviation.

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17.   The method in accordance with claim 16, characterized
in that the deviation is displayed on the monitor (06)
superimposed positionally accurately on the actual printed image
(03).

18.   The method in accordance with claim 16, characterized
in that the display represents a deviation in the quality of the
printed product.

19.   The method in accordance with claim 1, characterized
in that an area-scanning color camera (01) is employed instead of
a line-scanning color camera (01).

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